REMARKS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 1-16 are presently active in this case, Claims 1, 3, 10, and 11 having been amended and Claim 16 has been added by way of the present Amendment.

In the outstanding Official Action, Claims 1-9 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Kashima (U.S. Patent No. 6,471,559) in view of Katayama (U.S. Patent No. 6,481,411). Claims 10-15 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Kashima in view of Katayama and further in view of Watanabe et al. (U.S. Patent No. 6,446,594). For the reasons discussed below, the Applicant respectfully requests the withdrawal of the obviousness rejections.

The basic requirements for establishing a *prima facie* case of obviousness as set forth in MPEP 2143 include (1) there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings, (2) there must be a reasonable expectation of success, and (3) the reference (or references when combined) must teach or suggest all of the claim limitations. The Applicant submits that a *prima facie* case of obviousness has not been established in the present case because the cited references, either when taken singularly or in combination, do not teach or suggest all of the limitations recited in independent Claims 1 and 10-12.

Claims 1 and 10 of the present application advantageously recites an outboard motor comprising, among other features, an intake duct configured to provide intake air to the

intake unit, where the intake duct extends adjacent to a downstream side of the fuel injector unit. Claim 11 advantageously recites an outboard motor comprising, among other features, an intake duct configured to provide intake air to the intake unit, the intake duct extending adjacent to a downstream side of the fuel injector unit with respect to air flow inside the intake pipes, where the intake duct is provided with an air inlet at a lower end of the intake duct, and the air inlet is disposed above a lowermost intake pipe on the intake manifold and the air inlet opened downward. Claim 12 advantageously recites an outboard motor comprising, among other features, an intake passage connected to the throttle body on an upstream side thereof, and an intake duct connected to an upstream side of the intake passage and disposed in a space formed between a side surface of the engine and the intake manifold. The Applicant submits that the cited references, either when taken singularly or in combination, fail to disclose or suggest the above limitations.

By way of illustration and not limitation, the present application describes an embodiment in which an intake duct (35) is connected to an upstream end of an intake passage, which is connected to the upstream end of the silencer (28). (Page 11, lines 2-6.) The intake duct (35) extends downward in a space formed between the left-hand wall of the cylinder block (7) and the intake manifold (31). (Page 11, lines 6-8 and Figure 2-4, which depict the duct (35) as being positioned adjacent to a downstream side of the fuel injector unit (40).) The specification describes that the positioning of the intake duct (35) adjacent to a downstream side of the fuel injectors (40), as well as other features of the intake duct, enables the intake manifold (31, which has been cooled by the heat of vaporization of the fuel, to reduce the atmospheric temperature around the intake duct (35). (Page 14, line 18, through

page 15, line 1.) The specification indicates that as a result of this configuration and reduction of the atmospheric temperature around the intake duct (35), an intake temperature can be decreased, thus improving the intake charge efficiency and increasing the engine output.

The Kashima reference fails to teach or suggest an intake duct as recited in Claims 1 and 10-12. The Kashima reference describes an air induction system in which air is drawn in through a vent (not shown) formed in the cowling (20). The Kashima reference mentions that the vent is formed in an upper and rearwardly facing portion of the main cover portion (24) to reduce the induction of water or mist. (Column 5, lines 36-45.) The Kashima reference indicates that from within the cowling (20), air is drawn into the induction system through an air intake chamber (72) through an air inlet (not shown) formed near the top of the intake chamber (72)(column 5, lines 46-50), which is far from a fuel injector unit. The Kashima reference does not disclose or even suggest an intake duct that extends adjacent to a downstream side of a fuel injector unit, as recited in Claims 1 and 10 of the present application, an intake duct that extends adjacent to a downstream side of the fuel injector unit, where the intake duct is provided with an air inlet at a lower end of the intake duct, and the air inlet is disposed above a lowermost intake pipe on the intake manifold and the air inlet opened downward, as recited in Claim 11, or an intake duct connected to an upstream side of an intake passage and disposed in a space formed between a side surface of the engine and the intake manifold, as recited in Claim 12.

Additionally, the Katayama reference fails to supplement the deficiencies noted above in the teachings of the Kashima reference, since the Katayama reference does not teach or

suggest an intake duct as recited in Claims 1 and 10-12. The Katayama reference describes a system in which air enters into the silencer (200) through an opening depicted in Figure 10, which is far from a fuel injector unit. The Katayama reference does not disclose or even suggest an intake duct that extends adjacent to a downstream side of a fuel injector unit, as recited in Claims 1 and 10 of the present application, an intake duct that extends adjacent to a downstream side of the fuel injector unit, where the intake duct is provided with an air inlet at a lower end of the intake duct, and the air inlet is disposed above a lowermost intake pipe on the intake manifold and the air inlet opened downward, as recited in Claim 11, or an intake duct connected to an upstream side of an intake passage and disposed in a space formed between a side surface of the engine and the intake manifold, as recited in Claim 12.

Accordingly, the Applicant submits that Claim 1 is not obvious in view of the combination of the Kashima and Katayama references. Thus, the Applicant respectfully requests the withdrawal of the obviousness rejection of Claim 1, and Claims 2-9, which depend therefrom.

Additionally, the Watanabe et al. reference fails to supplement the deficiencies noted above in the teachings of the Kashima and Katayama references, since the Watanabe et al. reference does not teach or suggest an intake duct as recited in Claims 10-12. The Katayama reference describes a system in which a top cowling member (60) has at least one air intake opening, which is preferably disposed on its rear and top portion. Thus, ambient air enters the closed cavity (66), and then enters each plenum chamber member (122) through an inlet port (124). However, the inlet port (124) is located far from a fuel injector unit. Thus, the Watanabe et al. reference does not disclose or even suggest an intake duct that extends

adjacent to a downstream side of a fuel injector unit, as recited in Claim 10 of the present application, an intake duct that extends adjacent to a downstream side of the fuel injector unit, where the intake duct is provided with an air inlet at a lower end of the intake duct, and the air inlet is disposed above a lowermost intake pipe on the intake manifold and the air inlet opened downward, as recited in Claim 11, or an intake duct connected to an upstream side of an intake passage and disposed in a space formed between a side surface of the engine and the intake manifold, as recited in Claim 12.

Accordingly, the Applicant submits that Claims 10-12 are not obvious in view of the combination of the Kashima, Katayama, and Watanabe et al. references. Thus, the Applicant respectfully requests the withdrawal of the obviousness rejection of Claims 10-12, and Claims 13-15 which depend from Claim 12.

Newly added Claim 16 is fully supported by the disclosure. For example, Figure 4 depicts a non-limiting embodiment in which a fuel injector unit (40) is disposed on a crankcase side (note crankcase 6) of a vapor separator (38). Such a configuration is not disclosed in the Kashima, Katayama, and Watanabe et al. references, either singularly or in combination. For example, the fuel injector (94) in the Kashima reference is clearly disposed on the cylinder head side of the vapor separator (96). Similarly, the Watanabe et al. reference describes an arrangement in which an injector is disposed on a rear side of a vapor separator in the advancing direction, i.e., on the cylinder head side.

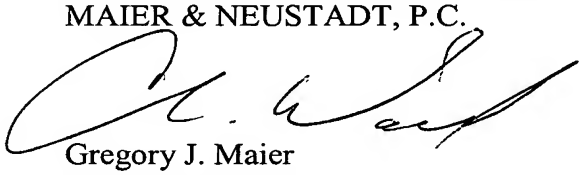
According to the arrangement of the present invention, the distance between the intake port of the cylinder head and the fuel injector can be made longer, and accordingly, the fuel jetted from the injector can be sufficiently atomized. In addition, since the intake pipe is

cooled with the heat of vaporization, which reduces the heat affect on the vapor separator disposed on the rear side of the injector, thus effectively suppressing the generation of the vapor.

Consequently, in view of the above discussion, it is respectfully submitted that the present application is in condition for formal allowance and an early and favorable reconsideration of this application is therefore requested.

Respectfully Submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.



Gregory J. Maier
Registration No. 25,599
Attorney of Record

Christopher D. Ward
Registration No. 41,367

Customer Number
22850
Tel. (703) 413-3000
Fax. (703) 413-2220
(OSMMN 10/01)

GJM:CDW:brf
I:\atty\cdw\24xxxx\245838US3\am1.doc